

# LARGE HERONRIES IN KUTCH AND THE NESTING OF GLOSSY IBIS *PLEGADIS FALCINELLUS* AT LUNA JHEEL, KUTCH, GUJARAT, INDIA<sup>1</sup>

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(With two text-figures)

**Key words:** Glossy Ibis, *Plegadis falcinellus*, Ciconiiformes, breeding, Rann of Kutch, India

While conducting various surveys for the grassland birds in Banni and other areas of Kutch, we came across some large heronries, and discovered breeding glossy ibis *Plegadis falcinellus*. We counted upto 250 nests of glossy ibis in 1992 and 500 in 1994. No breeding of glossy ibis and other wading birds took place during the drought year of 1993.

## INTRODUCTION

The glossy ibis *Plegadis falcinellus* is a widely distributed water bird, found in Asia, Europe, Africa, Central America and on many islands (Hancock *et al.* 1992). Ali and Ripley (1983) and Roberts (1991) describe it as partly resident and nomadic, and partly a winter visitor. In the Indian subcontinent so far, the breeding of glossy ibis has been reported in Sind, Pakistan, Oudh (north India), Orissa, Assam and Manipur (Ali, 1945). All these records are very old and do not mention details of the exact location of nesting, year of nesting and the number of nests. In the nonbreeding season, the glossy ibis can be seen in large flocks in many flooded portions of Banni grassland and on the edge of the Great and the Little Rann of Kutch. In the winter of 1992-94, some 500 to 700 glossy ibis were seen by us at Vakeria-Dhand, Chhari-Dhand, Servo-Dhand, Kheerjog-Dhand, Abhada-Jheel and Mokar-Jheel (*Dhand* in Sindhi-Kutchi means a shallow seasonal lake).

## STUDY AREA

In June 1992, our field station was set up at Fulay village to study the ecology of Banni

grasslands, Kutch dist. Gujarat. The first large heronry was discovered by us in September 1992 near Luna village. Luna village is located on the northernmost limit of the Banni grassland. Many low-lying villages in this region are inundated by heavy monsoons, causing them to be seasonally abandoned. Such habitations in the Banni region are locally known as "jheel villages" (jheel = shallow wetland).

## SURVEY RESULTS

While conducting various surveys for grassland birds in the Banni and other areas of Kutch, we discovered four large heronries (Fig 1.), described below:

A. **Luna Heronry:** On 30th September 1992 at Luna village on the edge of the Great Rann of Kutch, about 80 km northwest of Bhuj, we came across a huge heronry where eight species of birds were nesting, the glossy ibis being one of them (Tiwari 1993) (Table 1 for other species). From September 1992 to December 1994, the Luna heronry was visited many times. Owing to poor rainfall in 1993 (60 mm only), the Luna jheel was dry, hence nesting birds were absent from the heronry, but during two good rainfall years, a large number of nests were recorded at Luna on 30th September, 1992, and 7th August, 1994. Many nests at that time had grown up young ones. We therefore presume that the nest building and incubation must have

<sup>1</sup>Accepted February, 1996.

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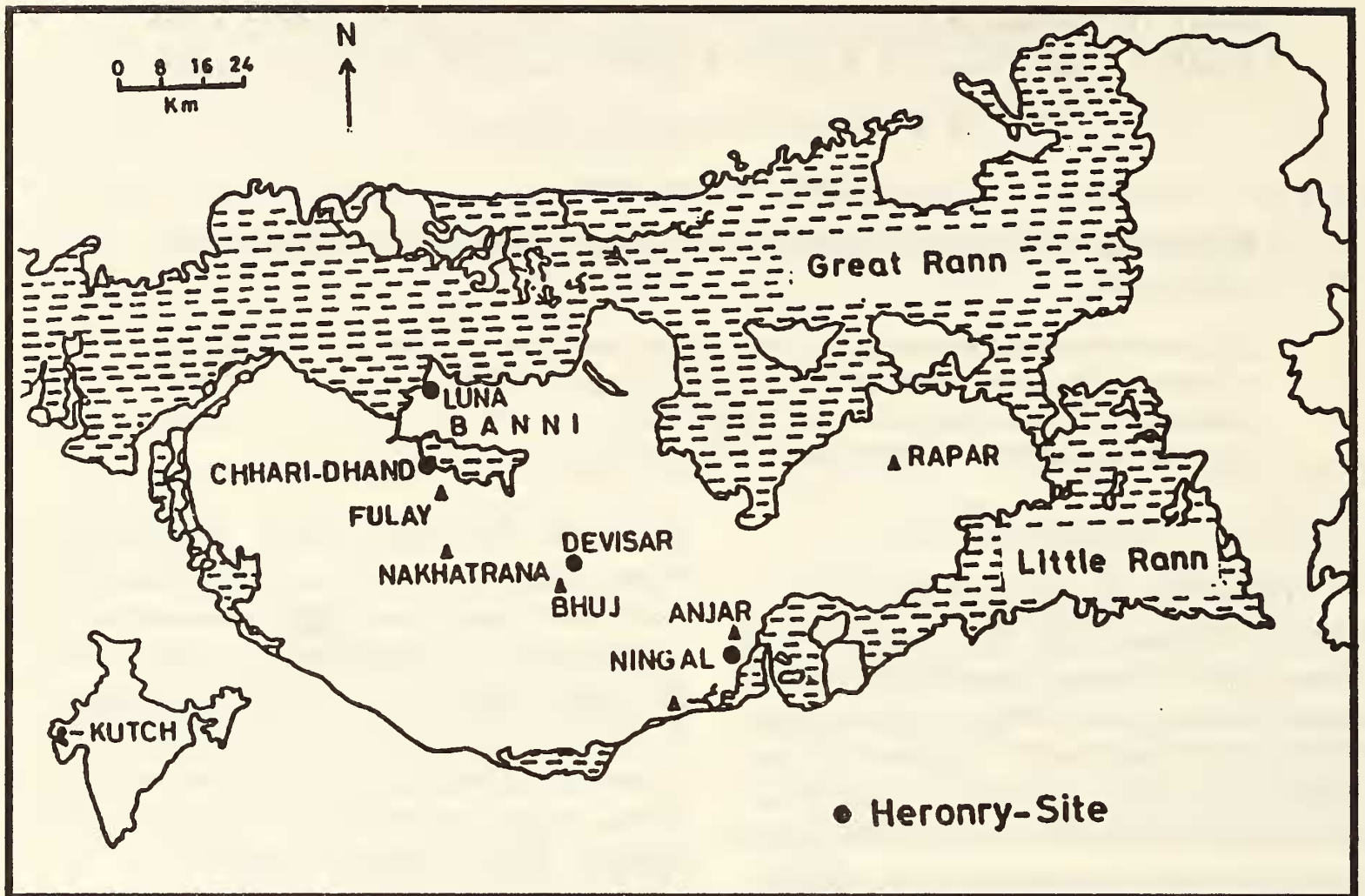


Fig. 1. Large Heronries of Kutch dist. Gujarat (India)

started in June or July. The fledglings leave the nest by the end of September or October.

The Luna heronry is reputed to be about 50 years old. According to the villagers, after a good monsoon, the glossy ibis breeds regularly in Luna, along with other species. The discovery of such a large breeding colony of glossy ibis is a record from western India.

Most of the nests were found on mesquite *Prosopis juliflora* and *Acacia nilotica* trees. During good rainfall years, water depth in Luna varies from 0.5 m to 2.5 m. Snails, fishes and frogs are abundant in the jheel. Besides fish and macro-invertebrates, the glossy ibises were observed feeding snails to their nestlings.

Upto five nests were seen on any one tree. The nearest nesting neighbours of the glossy ibis were mostly cattle egret *Bubulcus ibis* or night heron *Nycticorax nycticorax*. In August 1994, torrential rains caused heavy damage to the

nesting colony at Luna, but the colony was re-established by the birds within a period of about 20 days. The year 1994 received unusually heavy rainfall (1250 mm), whereas the mean annual rainfall for Kutch dist. is 340 mm.

Nestlings of glossy ibis, about one to three weeks old, have a pinkish rose coloured bill with two black bands on it, one broad band in the middle and one on top. The overall body coloration of the young bird is faded blackish brown. The number of young birds in the nest varied from one to three. House crows *Corvus splendens* were observed preying on the nestlings of waterbirds including about one to two weeks old young ones of the glossy ibis.

A large spoonbill colony was found in Luna jheel in 1994, but it was located about half a kilometre from the main heronry. The reason for this could be that 1 to 2 m high bushes, which are utilised by the spoonbills for nesting, were present

TABLE 1  
LUNA HERONRY\* NEST DETAILS

Species	Nest	Young	Nest	Nest	Young
	1992	1992	1993	1994	1994
Common name	Rainfall (640 mm)		(60 mm)	(1250 mm)	
Cattle Egret	3000	5500	Nil	6500	8000
Little Egret	50	90	"	250	350
Median Egret	35	75	"	150	200
Night Heron	50	100	"	25	35
Little Cormorant	220	500	"	50	80
Spoonbill	5	10	"	400	650
White Ibis	40	100	"	50	80
Glossy Ibis	250	500	"	500	725
Total	3650	6875	Nil	7925	10120

\* Most numbers are approximate

only in that area.

**B. Chhari-Dhand:** This colony was in a seasonal saucer-shaped natural depression in the Banni grassland which fills with water during rains. The area and depth of this wetland varies with rainfall. The maximum area recorded is around 80 sq. km after 640 mm rains in 1992. During the monsoon, the entire area around Chhari-Dhand gets flooded and the excess water then flows down to the Great Rann of Kutch. Thick mats of *Eleocharis* reeds, 1 to 2 m high grow on the outer fringes of Chhari-Dhand. The depth of this wetland varies from 0.5 to 1.5 m. *Tamarix* sp. and *Salvadora persica* bushes grow scattered in the wetland area. About 3,600 nests of five species of waterbirds were estimated in 1994. We used boats to reach the breeding colony and on each bush/tree counted the nests.

**C. Devisar:** This is a shallow 4 sq. km lake near Rudramata Dam, 15 km from Bhuj, the district headquarters of Kutch. Five species of egrets and herons nest here in the month of August and September after a well set monsoon. We estimated 800 to 1000 nests in September 1992.

**D. Ningal:** S. N. Varu, a keen ornithologist of Bhuj, found a heronry near Anjar village where painted storks *Mycteria leucocephala* nest regularly after a good monsoon. In September 1992, he estimated up to 200 nests.

TABLE 2  
CHHARI-DHAND NEST DETAILS

Species	No of Nests	No of Young
Purple Heron	35	40
Night Heron	50	65
Spoonbill	500	850
Cattle Egret	1500	2500
Little Cormorant	1500	2600
Total	3585	6055

## DISCUSSION

**Nesting success and rainfall:** In the study area, nesting of wading birds depends clearly on the amount of rainfall. This seems to be particularly true for the glossy ibis. There are no perennial natural waterbodies in the saline desert of Kutch. The major colony sites in Kutch are located either near dams and reservoirs or in the monsoon flooding areas in the Banni grassland and on the edge of the Great Rann of Kutch. The rainfall pattern of Kutch is very irregular and erratic, and so is the nesting of wading birds. During three years of our study period, no heronry was seen during the drought year (Fig 2).

We found that water-dependent species such as the glossy ibis, painted stork, egrets and herons breed only during good monsoon years.

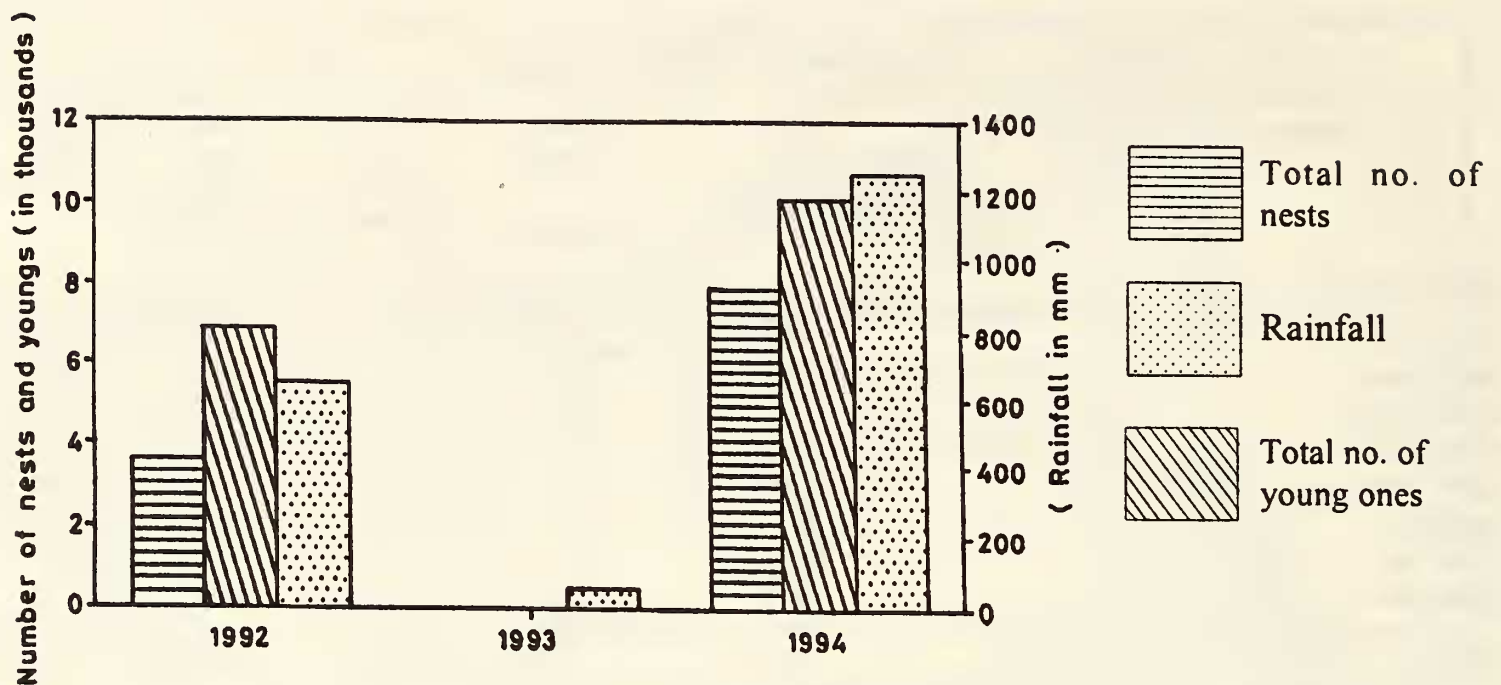


Fig. 2. Rainfall pattern and nesting of heronry birds at Luna jheel

Strict protection of the bird colonies is afforded by Luna villagers to the heronry. A few years ago a pastoral community from a neighbouring village used to collect young birds for food, an activity which has now stopped. Large scale commercial fishing without licence at Chhari-Dhand is today the main threat to the nesting birds, because it depletes their food. Pumping of water from Devisar and Ningal sites by farmers creates further problems for the nesting birds because this reduces the extent of the feeding areas. According to the villagers, the painted stork used to nest in large numbers in Luna heronry, but now it has stopped. The reason could be the collection of the young ones in the past.

#### ACKNOWLEDGEMENTS

This study was done under the Grassland Ecology Project, funded by the U. S. Fish & Wildlife Service, and sponsored by the Ministry of Environment and Forests, Govt. of India. We are grateful to Mr David Ferguson and Prof. Mark Behan of the USFWS, to Dr Jay Samant, former Director, BNHS, and Prof. A. H. Musavi, former Chairman, Centre of Wildlife & Ornithology, Aligarh Muslim University, Aligarh. Mr. S. N. Varu and Ashwin Pomal provided information on Devisar and Ningal. We thank Mr Himmatsinhji and Dr. Malcolm Coulter for their kind suggestions. Lastly, we thank Muhammad Saidad and Mehboob Alam for assisting us in the field.

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